

## Acclaim™ 5 Series

In-ceiling Loudspeaker  
Installation Manual

# INTRODUCTION

---

## Introduction

Thank you for selecting the Russound Acclaim 5 Series In-ceiling Speakers. Like all Russound speakers, they combine acoustic technology with durability and will provide years of musical enjoyment. The single-point stereo models feature a dual voice coil design allowing both right and left signals to function in one speaker. This is ideal for smaller rooms or where there is not a defined listening position. The 2-way models have pivoting tweeters to allow the sound to be directed toward the listener.

The Acclaim 5 Series line provides solutions for background music and dedicated music listening. The Acclaim 5 Series combines premium acoustic materials with advanced drivers to deliver exceptional performance in every application.

Some models offer Treble and Bass frequency adjustment buttons. This adjustment allows you to tailor the sound of the speakers to better match the listening environment. The buttons located on the front baffle offer +3dB and 0 dB settings.

In addition to easy mounting features, Russound Acclaim 5 Series speakers feature high quality drivers, sophisticated crossover networks, and advanced designs to ensure optimum reproduction in your home, no matter what the source material may be.

## Speaker Wire

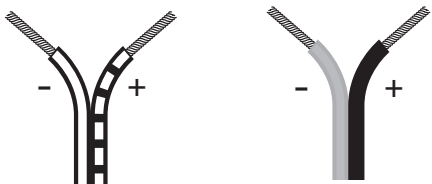
The amount of wire needed varies with speaker placement. Label speaker wires with left, right, and room location.

**What kind to use:** We recommend using Russound AW series speaker cable or any reputable brand of 16 to 12 gauge multi-stranded wiring for amplifier-to-speaker connections.

**Selecting the proper gauge:** Wire is measured in gauges: the bigger the number, the smaller the wire. The gauge of wire needed is determined by the distance between your amplifier/receiver and the speakers. The longer the run, the heavier the gauge needed. Use the following chart as a guide:

<u>Length</u>	<u>Minimum Gauge</u>
0' to 100'	16
50' to 150'	14
100' to 200'	12

If the conductors are not sheathed in colored jackets, be consistent with usage. The standard colors on the terminals are red Positive (+) and black Negative (-). If the wire has transparent insulation, one conductor will be copper-colored (+) and the other silver-colored (-). If the wire has an opaque insulation, the conductors are differentiated by a series of ribs or grooves, a stripe, or dotted line on one conductor. Use and mark these as the Positive (+) conductor.



Typical usage of speaker wire conductors

## Installation Tips

When installing the speakers, avoid:

- T-bar "drop ceilings" with very thin fiberboard panels which can buzz and vibrate. If needed, reinforce the drop-in panel with wood or particle board.
- Ceilings where there are pipes, heating ducts and especially AC wiring in the general vicinity.

## Speaker Wire Paths

- Avoid running speaker wires close to house electrical wiring for any distance. If you have to run them parallel, leave two feet between the wiring. Speaker wires should cross AC lines at a 90° angle.
- The entire path between speakers and amplifier should be clear and unobstructed. Confirm placement for a wall port close to the intended location of the amplifier or receiver.
- Label speaker wires at each end with Left and Right and the room location.

## Impedance Matching for Amplifiers and Speakers

Not all amplifiers or receivers can safely operate two sets of speakers at once. If you intend to use more than one pair of speakers at a time it's important to consider both the impedance of the speakers and the capabilities of the amplifier or receiver you're using. Changing the bass frequency adjustment from +3 dB to 0 dB will change the impedance from 6 ohms to 8 ohms respectively.

## PREPARATION / SPEAKER PLACEMENT

### Speaker Placement in the Room

Determine the intended use and placement of the speakers in the room. If they are going to be your primary listening source in a room, you need to consider some other factors to insure proper imaging. The term "stereo imaging" refers to a speaker system's ability to project music so that it sounds like the performers are in a three-dimensional space between the speakers.

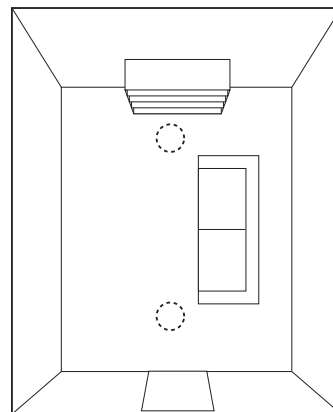
Bass frequencies are emphasized when ceiling speakers are placed close to a wall. Avoid placing one speaker in a corner and another on a long flat surface. The best acoustic performance will result if both speakers are placed in similar positions and face a similar type of surface.

The ceiling speakers should be placed directly to the sides or rear of the prime listening position with the tweeters aimed toward the listener. This configuration is also suitable for a TV/movie and music mixed use.

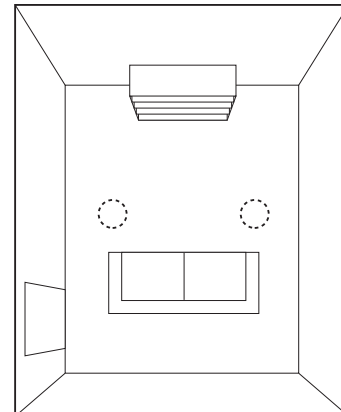
Acclaim In-ceiling speakers may be used for rear surround sound channels by placing them just behind the viewers. Refer to the Home Theater placement diagram.

Refer to the details at right for sample In-ceiling placement options.

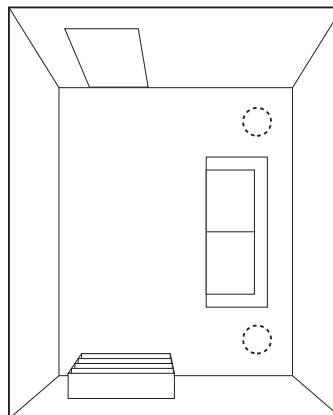
- *Good placement for serious listening:* Stereo pair in-ceiling speakers. 6' to 8' (1.8m-2.4m) apart, on the long wall of a rectangular room, centered on the listening area.
- *Best placement for serious listening:* Stereo pair in-ceiling. 6' to 8' (1.8m-2.4m) apart, on the short wall of a rectangular room, centered on the listening area.
- *Good placement for background listening:* Stereo pair behind, above or to the sides of the main listening area. 6' to 8' (1.8m-2.4m) apart, centered on the listening area.
- *Surround sound:* The multiple surround locations can all be made to work as long as the tweeters are properly directed. The ceiling speakers should have the tweeters aimed toward the listener.



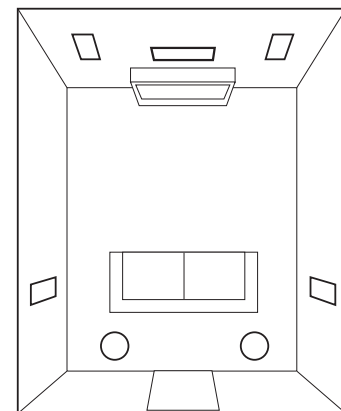
Good Placement  
Serious Listening



Best Placement  
Serious Listening



Good Placement  
Background Listening



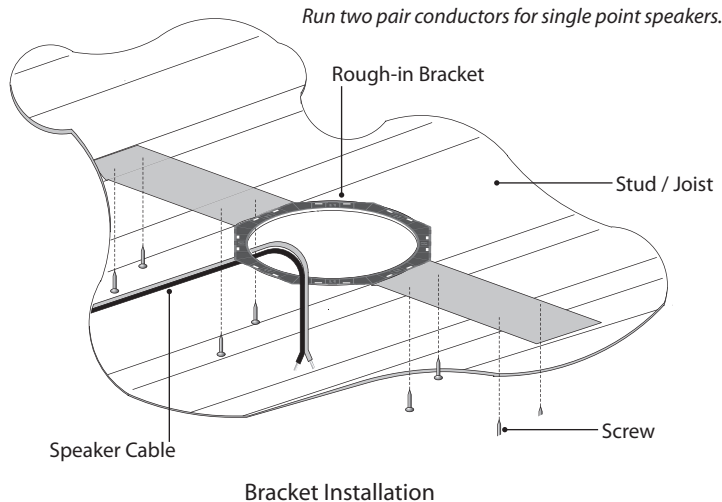
Home Theater  
Surround Sound

## Pre-wire or Pre-construction

Locate all obstructions (AC wiring, plumbing, duct work, studs, and joists). Route the speaker wire to the speaker location avoiding all obstacles.

Russound offers Speaker Rough-In Brackets that can be fastened to the adjacent studs. Once the dry wall is installed, the opening is cut out. There are holes in the bracket for speaker wire tie-off to keep the wire from being lost during construction.

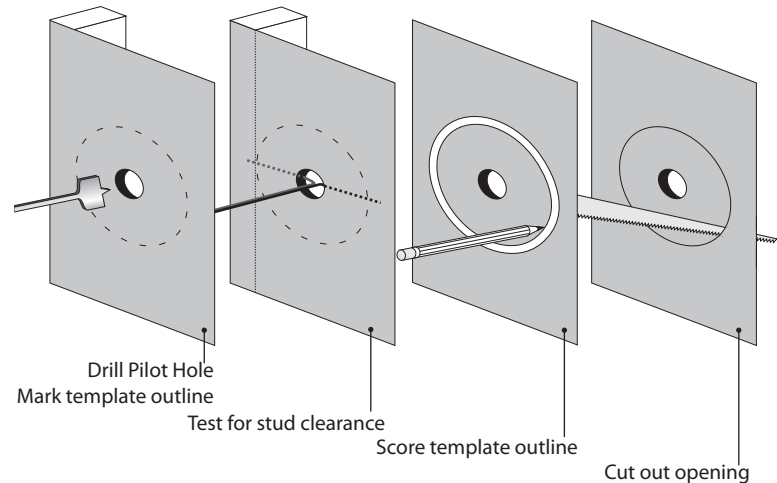
Make sure the speaker cutout (hole) doesn't extend further than ¼" (0.6 cm) from the inside of the mounting bracket.



## Retrofit Installation

Locate existing pipes, duct work, and AC wiring before cutting any holes in the ceiling.

1. Center the cardboard template between adjacent joists, avoiding all wiring, pipes, duct work, and lightly mark the outline with a pencil. Then use a keyhole/drywall saw or motorized spiral-cut tool to make the opening.
2. Score the outline of the template with a utility knife to prevent chipping. If dealing with lath and plaster or thick paneling, drill 1" (2.5 cm) holes in several places around the pencil outline. Use a fine-toothed keyhole saw or hacksaw blade with slow strokes to saw through and remove the inner surface.



Retrofit Installation

## PREPARATION FOR INSTALLATION

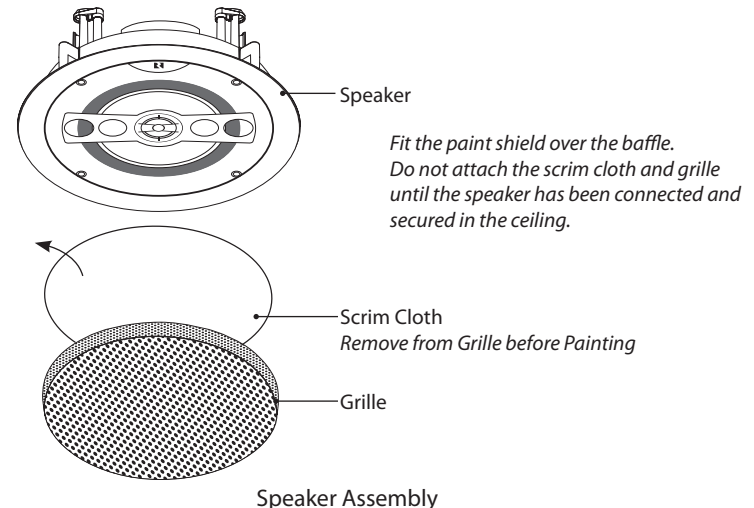
### Additional Tips / Considerations

- If possible, run speaker wires after AC wiring is in place to avoid induced hum caused by close parallel proximity of the two types of wire.
- Secure speaker wires in place against a stud along vertical runs with insulated staples only. Do not pierce the wire insulation. Allow a bit of slack for expansion of building materials.
- Route horizontal wire runs through holes drilled in studs at roughly equal heights.
- The speakers should not be installed until the wallboard is in place. In the meantime, leave several feet of wire coiled up and secured to the back side of the mounting frame. Excess length can be removed during final assembly.
- When installing the drywall, make sure the speaker cutout hole doesn't extend farther than ¼" (0.6 cm) from the inside of the mounting frame.
- Any speaker installed in a ceiling should have a safety wire firmly tied between the back of the speaker assembly and the frame of the building. Use any strong insulated wire and connect it to the speaker baffle, being careful not to let it interfere with the speaker's operation. The other end should be firmly attached to the joist or flooring above using a hook, nail, or other reliable fastener.
- Terminate the wires in an outlet box attached to a stud or retrofit junction box at the exit location. Utilize an outlet plate which has connections for speaker wire terminations. Russound dealers offer a full line of Russound PlateMate™ connection systems.
- After the drywall is secured and finished, install the speakers as described in this manual.

### Painting the Speaker Frame and Grille

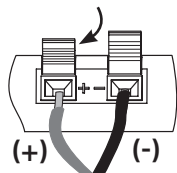
Russound Acclaim Speakers have a designer white finish that can be painted with ordinary latex paint. Use the paint shield to protect the speaker from any paint spatter.

1. Remove the speaker grilles. From the back of the speaker, push the clamp (dog-ear) towards the grille to loosen it so you can pull it off. If the speaker is already installed use a slightly bent paperclip to remove the grille. Remove the scrim cloth from the grille and set aside.
2. Insert the paint shield into the baffle.
3. Paint the outer speaker frame and grille separately. Use the same coverage on both the grille and frame. Russound recommends diluting the latex paint with water 4:1 or 5:1 proportionally.
4. While the paint is still wet on the grille, and the grille is not in the frame, use a gentle burst of compressed air against the outside surface to clear the fine holes in the mesh.
5. After the paint has thoroughly dried, continue with the installation.



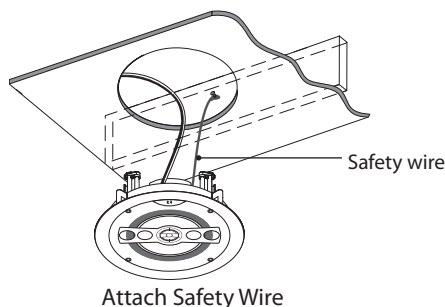
## Installation

1. Remove the grille from the speaker, if applicable. Use the clamp (dog-ear) to push the grille out from the back side.
2. Connect the speaker wire to the speaker terminals:
  - Leave about 2' (60 cm) of wire extending through the ceiling cutout.
  - Pull the conductors apart so the last two inches are separated and remove ½" (1.3 cm) of insulation from the end of each conductor.
  - Twist the strands in each conductor into tight spirals.
  - Attach the speaker wires to the red and black speaker terminals. Connect the Positive (+) conductor to the Red terminal and the Negative (-) conductor to the Black terminal. Make sure that no stray strands of wire are touching the other conductor or terminal.
  - Single point speakers have four terminals; Right(+), (-) and Left(+), (-). Run an extra pair of conductors and observe proper polarity when making connections.

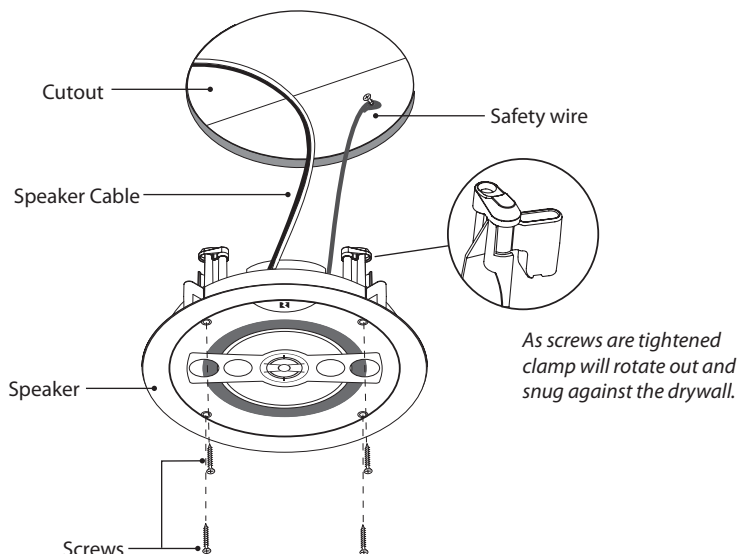


Insertion of speaker wire on back of speaker baffle

3. Connect a safety wire from the building structure to the speaker frame or through the speaker basket. It should not interfere with the speaker operation.



4. Center the frame in the cutout. Tighten the screws equally until the clamps secure the frame. Do not overtighten.



Install Speaker Frame

## TESTS AND ADJUSTMENTS

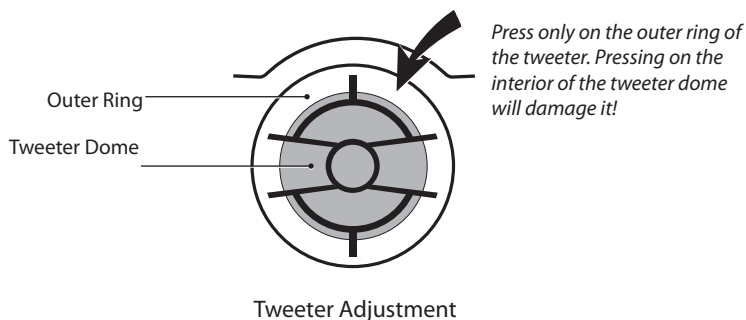
### Listening Test

It's a good idea to test everything at this point.

1. Turn on your stereo system or music source. Make sure that the volume control is turned down and that the balance control is set to center.
2. Gently turn up the volume. You should hear music coming out of your new Russound Speakers! (If you don't, refer to the troubleshooting guide.)
3. Now rotate the stereo's balance control all the way to the left. Sound should only come out of your left speaker. If it comes out of the right speaker, skip to Step 5.
4. Rotate the balance control all the way to the right. Sound should only come out of the right speaker.
5. If sound comes from the right speaker when the stereo's balance control is turned to the left, you'll need to change the connections on the back of the amplifier/receiver. **Note:** Turn off the amplifier. Swap the wires attached to the left and right speaker terminals.

### Tweeter Adjustment

The tweeters pivot and should be aimed toward the intended listener. Before installing the grille, gently press on the outside of the tweeter ring as shown. **Note:** Not applicable for the single point stereo speakers - The tweeters do not pivot and pushing on the tweeters will damage the domes.

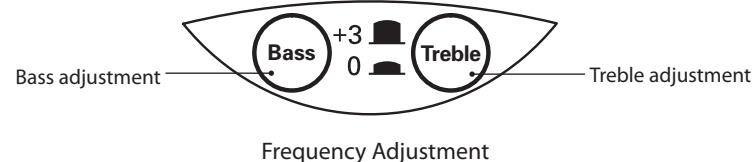


### Adjusting the Frequency Response

Some models are equipped with Treble and Bass frequency adjustment buttons. Pressing the button once will keep the button depressed, and pressing the button again will release it. Depending upon the button position the settings are as follows:

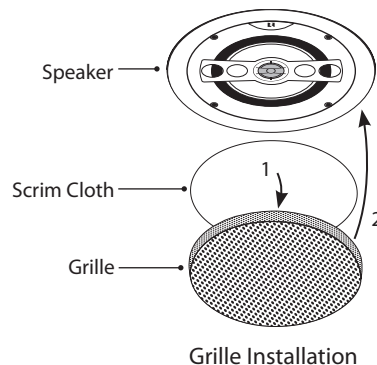
+3 dB: Increases the loudness of the selected frequency (Bass or Treble)  
(recommended start setting)

0 dB: Selected frequency remains neutral



### Grille Installation

After all adjustments and listening tests are made install the grille. Replace the scrim cloth in the grille smoothing the material in place. Insert the speaker grille into the frame. Press gently into place, taking care not to scratch the frame finish or bend the grille. In most installations, the grilles will fit tightly without causing vibration. If any audible vibration does occur, use special damping/adhesive material.



## Troubleshooting Guide

Before returning your Russound speakers for service, try these simple remedies first.

### **No sound from either speaker:**

- Incorrect source selected on receiver or preamplifier.
- Mute button pressed on receiver.
- Wrong speaker output selected; many receivers have an "A" and "B" speaker switch. Make sure it is in the correct position.
- In-wall Volume control not turned up or wired incorrectly.
- If using a speaker selector, room/station not turned on or improperly connected.

### **No sound from one speaker:**

- Unsecured connection at either the speaker or amplifier - double-check all connections.
- Balance control turned all the way left or right - return it to center.
- Bad connecting cable between sound source and amplifier - try a new cable.
- Check for stray wire strands crossing the speaker terminals.
- Defective speaker - contact your Russound dealer or call Russound Tech Support at 603.659.5170.
- Any other problems not listed, discuss with your dealer or call Russound.

## TECHNICAL SPECIFICATIONS

**Model:** 5C51  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 5.25" (13.3 cm) Vacuum Formed Polypropylene  
**Tweeters:** Pivoting 0.5" (1.3 cm) PEI  
**Cutout:** 6.75" (17.15 cm) diameter  
**Mounting Depth:** 3" (7.6 cm)  
**Dimensions:** 8.2" (20.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 75 watts  
**Sensitivity:** 87 dB SPL (2.83V @ 1m)  
**Frequency Response:** 72 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 54 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 8 ohms  
**Unit Weight:** 2.15 lbs (0.98 kg)

**Model:** 5C51S  
**Description:** In-ceiling Single Point Stereo Loudspeaker  
**Woofers:** 5.25" (13.3 cm) Vacuum Formed Polypropylene  
**Tweeters:** Two 0.5" (1.3 cm) PEI  
**Cutout:** 6.75" (17.15 cm) diameter  
**Mounting Depth:** 3" (7.6 cm)  
**Dimensions:** 8.2" (20.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 75 watts total  
**Sensitivity:** 86 dB SPL (2.83V @ 1m)  
**Frequency Response:** 62 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 49 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 6 ohms per channel  
**Unit Weight:** 2.25 lbs (1.02 kg)

**Model:** 5C61  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 6.5" (16.5 cm) Vacuum Formed Polypropylene  
**Tweeters:** Pivoting 0.5" (1.3 cm) PEI  
**Cutout:** 8.375" (21.3 cm) diameter  
**Mounting Depth:** 3.5" (8.9 cm)  
**Dimensions:** 9.83" (25 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 75 watts  
**Sensitivity:** 87 dB SPL (2.83V @ 1m)  
**Frequency Response:** 59 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 46 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 8 ohms  
**Unit Weight:** 2.8 lbs (1.27 kg)

**Model:** 5C61S  
**Description:** In-ceiling Single Point Stereo Loudspeaker  
**Woofers:** 6.5" (16.5 cm) Vacuum Formed Polypropylene  
**Tweeters:** Two 0.5" (1.3 cm) PEI  
**Cutout:** 8.375" (21.3 cm) diameter  
**Mounting Depth:** 3.5" (8.9 cm)  
**Dimensions:** 9.83" (25 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 75 watts total  
**Sensitivity:** 87 dB SPL (2.83V @ 1m)  
**Frequency Response:** 55 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 43 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 6 ohms per channel  
**Unit Weight:** 2.85 lbs (1.29 kg)

**Model:** 5C62  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 6.5" (16.5 cm) Vacuum Formed Polypropylene  
**Tweeter:** Pivoting 1" (2.5 cm) Silk  
**Cutout:** 8.375" (21.3 cm) diameter  
**Mounting Depth:** 3.5" (8.9 cm)  
**Dimensions:** 9.83" (25 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 85 watts  
**Sensitivity:** 87 dB SPL (2.83V @ 1m)  
**Frequency Response:** 59 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 46 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 8 ohms  
**Unit Weight:** 3 lbs (1.36 kg)

**Model:** 5C64S  
**Description:** In-ceiling Single Point Stereo Loudspeaker  
**Woofers:** 6.5" (16.5 cm) IMPP with Kevlar Fibers  
**Tweeters:** Two 0.5" (1.3 cm) Silk  
**Cutout:** 8.375" (21.3 cm) diameter  
**Mounting Depth:** 3.5" (8.9 cm)  
**Dimensions:** 9.83" (25 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 100 watts total  
**Sensitivity:** 87 dB SPL (2.83V @ 1m)  
**Frequency Response:** 52 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 40 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 6 ohms per channels  
**Unit Weight:** 2.85 lbs (1.29 kg)

**Model:** 5C82  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 8.0" (20.3 cm) Vacuum Formed Polypropylene  
**Tweeter:** Pivoting 1" (2.5 cm) Silk  
**Cutout:** 9.875" (25.1 cm) diameter  
**Mounting Depth:** 4.2" (10.7 cm)  
**Dimensions:** 11.35" (28.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 125 watts  
**Sensitivity:** 88 dB SPL (2.83V @ 1m)  
**Frequency Response:** 37 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 30 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 8 ohms  
**Unit Weight:** 4.25 lbs (1.93 kg)

**Model:** 5C84  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 8.0" (20.3 cm) IMPP with Kevlar Fibers  
**Tweeter:** Pivoting 1" (2.5 cm) Silk  
**Cutout:** 9.875" (25.1 cm) diameter  
**Mounting Depth:** 4.2" (10.7 cm)  
**Dimensions:** 11.35" (28.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Steel  
**Recommended Power:** 10 - 150 watts  
**Sensitivity:** 89 dB SPL (2.83V @ 1m)  
**Frequency Response:** 36 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 28 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 8 ohms  
**Unit Weight:** 4.75 lbs (2.15 kg)

## TECHNICAL SPECIFICATIONS

**Model:** 5C85  
**Description:** 2-way In-ceiling Loudspeaker Pair  
**Woofers:** 8.0" (20.3 cm) Aluminum  
**Tweeters:** Pivoting 1" (2.5 cm) Titanium  
**Cutout:** 9.875" (25.1 cm) diameter  
**Mounting Depth:** 4.2" (10.7 cm)  
**Dimensions:** 11.35" (28.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Aluminum  
**Recommended Power:** 10 - 150 watts  
**Sensitivity:** 90 dB SPL (2.83V @ 1m)  
**Frequency Response:** 39 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 32 Hz - 20 kHz -6/+3 dB  
**Frequency Adjustment:** Treble and Bass buttons  
**Nominal Impedance:** 6 ohms / 8 ohms  
**Unit Weight:** 4.75 lbs (2.15 kg)

**Model:** 5C85S  
**Description:** Single Point Stereo Loudspeaker  
**Woofers:** 8.0" (20.3 cm) Aluminum  
**Tweeters:** Two 1" (2.5 cm) Titanium  
**Cutout:** 9.875" (25.1 cm) diameter  
**Mounting Depth:** 4.2" (10.7 cm)  
**Dimensions:** 11.35" (28.8 cm) diameter  
**Terminals:** Spring terminals  
**Grille:** Aluminum  
**Recommended Power:** 10 - 150 watts (total)  
**Sensitivity:** 89 dB SPL (2.83V @ 1m)  
**Frequency Response:** 47 Hz - 20 kHz  $\pm$  3 dB  
**Frequency Range:** 37 Hz - 20 kHz -6/+3 dB  
**Nominal Impedance:** 6 ohms per channel  
**Unit Weight:** 4.75 lbs (2.15 kg)

All Russound Acclaim 5 Series Speaker products have a Limited Lifetime Warranty against defects in materials and workmanship. Proof of Purchase must accompany all claims. During the warranty period Russound will replace any defective part and correct any defect in workmanship without charge for either parts or labor.

Russound may replace returned speakers with a product of equal value and performance. In such cases, some modifications to the mounting may be necessary and are not Russound's responsibility.

For this warranty to apply, the unit must be installed and used according to its written instructions. If necessary, repairs must be performed by Russound. The unit must be returned to Russound at the owner's expense and with prior written permission. Accidental damage and shipping damage are not considered defects, nor is damage resulting from abuse or from servicing performed by an agency or person not specifically authorized in writing by Russound.

Russound products are sold only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Russound reserves the right to limit the warranty of products purchased from an unauthorized dealer or other source, including retailers, mail order sellers, and online sellers, to ninety (90) days from the date of purchase.

Damage to or destruction of components due to application of excessive power voids the warranty on those parts. In these cases, repairs will be made on the basis of the retail value of the parts and labor. To return for repairs, the unit must be shipped to Russound at the owner's expense, along with a note explaining the nature of service required. Be sure to pack the speaker(s) in a corrugated container with at least 3" (7.6 cm) of resilient material to protect the unit from damage in transit.

Before returning the unit for repair, call Russound at 603.659.5170 for a Return Authorization number. Write this number on the shipping label and ship to:

**Russound**  
ATTN: Service  
5 Forbes Road  
Newmarket, NH 03857

This Warranty Does Not Cover:

- Damage caused by abuse, accident, misuse, negligence, or improper operation (installation).
- Products that have been altered or modified.
- Any product whose identifying number or decal, serial #, etc. has been altered, defaced or removed.
- Normal wear and maintenance.

Due to our continual efforts to improve product quality as new technology and techniques become available, Russound/FMP, Inc. reserves the right to revise speaker systems specifications without notice.







# **Acclaim™ 5 Series**

## **In-ceiling Loudspeakers**

### **Installation Manual**

**5" Models: 5C51**

**6.5" Models: 5C61 - 5C62**

**8" Models: 5C82 - 5C84 - 5C85**

**Single Point Stereo Models: 5C51S - 5C61S - 5C64S - 5C85S**

©2009 Russound. All rights reserved.

All trademarks are the property of their respective owners.

Specifications are subject to change without notice.

Russound is not responsible for typographical errors or omissions.

Russound, Inc.

5 Forbes Road, Newmarket, NH 03857

tel 603.659.5170 • fax 603.659.5388

email: [tech@russound.com](mailto:tech@russound.com) [www.russound.com](http://www.russound.com)

**28-1310 Rev. 1 04/01/09**